

# Anna Jezierska

Université Paris-Est  
Laboratoire d'informatique Gaspard-Monge, France  
Polish national.

September 25, 2013

anna.jezierska@univ-paris-est.fr  
www-syscom.univ-mlv.fr/~jeziersk

## Education

- **Université Paris-Est** Paris, France  
*Post-Doc* 2013 – present
  - Advisors: Prof. Hugues Talbot and Prof. Nicolas Passat
  - Thesis: Brain vascular image registration
- **Université Paris-Est** Paris, France  
*Ph.D.* 2009 – 2013
  - Advisors: Prof. Jean-Christophe Pesquet
  - Co-advisor: Dr Caroline Chaux and Prof. Hugues Talbot
  - Thesis: Image Restoration in the presence of Poisson-Gaussian noise
- **Gdansk University of Technology** Gdańsk, Poland  
*M.Sc. Automation and Robotics* 2000 – 2006
  - Advisor: Dr Paweł Raczyński
  - Thesis: Implementation of a car mobile platform as a guard vehicle and a development of optical inspection system

## Publications (available at [www-syscom.univ-mlv.fr/~jeziersk/publications.html](http://www-syscom.univ-mlv.fr/~jeziersk/publications.html))

- **Journal papers**
  - 1) Anna Jezierska, Caroline Chaux, Jean-Christophe Pesquet, Hugues Talbot and Gilbert Engler, *An EM Approach for Poisson-Gaussian Noise Modeling*, accepted to IEEE Transactions on Signal Processing, 2012
  - 2) Emilie Chouzenoux, Anna Jezierska, Jean-Christophe Pesquet, and Hugues Talbot *A Majorize-Minimize Subspace Approach for  $\ell_2 - \ell_0$  Image Regularization*, SIAM Journal on Imaging Science, vol 6, pages 563-591, 2013
  - 3) Caroline Chaux, Anna Jezierska, Jean-Christophe Pesquet, and Hugues Talbot *A spatial regularization approach for vector quantization*, Journal of Mathematical Imaging and Vision, vol 41, pages 23-38, 2011
- **Conference papers**
  - 1) Anna Jezierska, Emilie Chouzenoux, Jean-Christophe Pesquet, and Hugues Talbot *A Convex Variational Approach for Restoring Data Corrupted with Poisson-Gaussian Noise*, French-German-Polish conference on Optimization (FGP), Kraków, 23-27 September, 2013
  - 2) Mireille El Gheche, Anna Jezierska, Jean-Christophe Pesquet, and Joumana Farah *A Proximal Approach for Signal Recovery Based on Information Measures*, European Signal Processing Conference (EUSIPCO), Marrakech, Marocco, 9-13 September, 2013

- 3) Daniel Węsierski, Maher Mkhinini, Patrick Horain, and Anna Jeziarska  
*Fast Recursive Ensemble Convolution of Haar-like Features*,  
Computer Vision and Pattern Recognition (CVPR),  
Providence, Rhode Island, 18-20 June, 2012
- 4) Anna Jeziarska, Hugues Talbot, Caroline Chaux, Jean-Christophe Pesquet, and Gilbert Engler  
*Poisson-Gaussian noise parameter estimation in fluorescence microscopy imaging*,  
International Symposium on Biomedical Imaging (ISBI),  
Barcelona, 2-5 May, 2012
- 5) Anna Jeziarska, Emilie Chouzenoux, Jean-Christophe Pesquet, and Hugues Talbot  
*A primal-dual proximal splitting approach for restoring data corrupted with Poisson-Gaussian noise*,  
International Conference on Acoustics, Speech, and Signal Processing (ICASSP),  
Kyoto, 25-30 March, 2012
- 6) Emilie Chouzenoux, Jean-Christophe Pesquet, Hugues Talbot, and Anna Jeziarska  
*A memory gradient algorithm for  $\ell_2 - \ell_0$  regularization with applications to image restoration*,  
International Conference on Image Processing (ICIP),  
Brussels, 11-14 September 2011
- 7) Anna Jeziarska, Caroline Chaux, Jean-Christophe Pesquet, and Hugues Talbot  
*An EM approach for Poisson-Gaussian noise modeling*,  
European Signal Processing Conference (EUSIPCO),  
Barcelona, 29 August - 2 September 2011
- 8) Anna Jeziarska, Hugues Talbot, Olga Veksler, and Daniel Węsierski  
*A fast solver for truncated-convex priors: quantized-convex split moves*,  
Energy Minimization Methods in Computer Vision and Pattern Recognition (EMMCVPR),  
Saint Petersburg, 25-27 July 2011
- 9) Anna Jeziarska, Caroline Chaux, Hugues Talbot, and Jean-Christophe Pesquet  
*Image quantization under spatial smoothness constraints*,  
International Conference on Image Processing (ICIP),  
Honk Kong, 26-29 September 2010

## Invited talks

- **Challenges in restoring data corrupted by Poisson-Gaussian noise** Geneva, Switzerland  
*CERN* June 22, 2012

## Participation in Workshops and Conferences

- **16th French-German-Polish conference on Optimization** Kraków, Poland  
*AGH University of Science and Technology* September 23–27, 2013
- **10th International Symposium on Biomedical Imaging** Barcelona, Spain  
*Centre Convencions Internacional Barcelona* May 2–5, 2012
- **4th Conference on Mathematics and Image Analysis** Paris, France  
*Institut Henri Poincaré* January 16–18, 2012
- **19th European Signal Processing Conference** Barcelona, Spain  
*Centre Tecnològic de Telecomunicacions de Catalunya* 29 August – 2 September, 2011

- **8th International Conference EMMCVPR** Saint Petersburg, Russia  
*Radisson Royal Hotel* July 25–27, 2011
- **17th International Conference on Image Processing** Hong Kong, China  
*Hong Kong Convention and Exhibition Centre* September 26–29, 2010
- **Summer School on Inverse Problems** Porquerolles, France  
*Centre Igesa de Porquerolles* May 2–8, 2010
- **2nd Conference on Mathematics and Image processing** Orléans, France  
*Université d'Orléans* 29 March – 1 April, 2010
- **3rd Conference on Mathematics and Image Analysis** Paris, France  
*Institut Henri Poincaré* December 14–16, 2009

## Other Research Experience

- **Participant of scientific project** ANR Vivabrain  
*www.icube-vivabrain.unistra.fr, France* 2013 – present
- **Participant of scientific project** ANR Diamond  
*www-syscom.univ-mlv.fr/ANRDIAMOND, France* 2009 – 2013
- **Software engineer** Volkswagen AG via Erbkönig GmbH  
*Research and Development Department, Wolfsburg, Germany* 2007 – 2009  
– Visual automatic inspection system for car control units

## Academic Service and Contributions

- Teaching :
  - Image Processing (32h for Master Students)
- Refereeing papers for the following journals :
  - Pattern Recognition Letters
  - IEEE Transactions on Circuits and Systems for Video Technology
- Refereeing papers for the following conferences :
  - European Signal Processing Conference (EUSIPCO)
- Software :
  - Vector quantization: GC-PPXA-QUANTIZER available at [www-syscom.univ-mlv.fr/~jeziersk/software.html](http://www-syscom.univ-mlv.fr/~jeziersk/software.html)

## Competence

- Technical Skills
  - Programming Languages: C/C++, Python, HTML
  - Specialized Software: MATLAB, Maple, Scilab, L<sup>A</sup>T<sub>E</sub>X
- Languages
  - English, German, French, Polish (native)